

MAYO CLINIC, PHOENIX

Flood protection and erosion control with PROPEX Pyramat



Industry:	Water
Application:	Channel protection
Location:	Phoenix, Arizona
Product:	PROPEX® Pyramat®

flows. The entire project lies within the FEMA defined alluvial floodplain FEMA Special Flood Hazard Area.

In 2005 an Individual 404 Permit was issued by the USACE for the entire Campus, allowing disturbance to jurisdictional washes located on the Campus. Conditions of approval required reconstructed wash corridors to be revegetated.

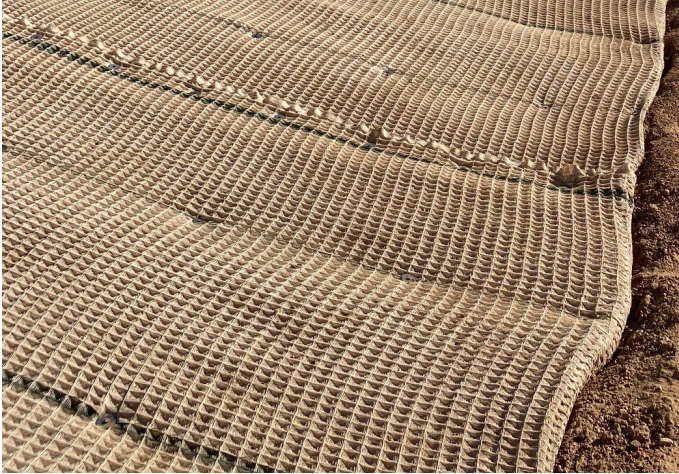
Overview

The Mayo Clinic Hospital, Phoenix is located within the southernmost portion of the Desert Ridge Master Planned Community. Early USACE permitting required wash corridors within the community to remain natural. Construction of the Mayo Clinic Phoenix Campus began in 1996. Prior to development, the City of Phoenix required a corridor to be designated along the eastern boundary of the Campus for the construction of a regional drainage channel. This channel would protect the eastern portion of the Campus from offsite

The channel section is designed to have a meandering, low-flow channel section to match the existing wash bank's full capacity.

CASE STUDY

Flood protection and erosion control with **PROPEX** Pyramat



Solution

PROPEX Pyramat is a High Performance Turf Reinforcement Mat (HPTRM) that protects the ground surface from erosion while promoting natural vegetation. Due to its homogenous structure, **PROPEX** Pyramat can be cut to accommodate landscape plantings for aesthetics. **PROPEX** Pyramat 75 is an approved material for privately owned channels within the city of Phoenix.

After **PROPEX** Pyramat was installed, it was soil filled and hydroseeded with native seed mix. The installed nature-based solution meets the USACE permit requirements and required no revisions to the FEMA Flood Insurance Rate Map (FIRM).

Challenge

Recent development along the eastern side of the campus required the construction of drainage improvements. A new channel was tied-in to existing culverts below the 101 Loop and then routed down a gradient between buildings on the eastern portion of the Campus.

The channel section is designed to have a meandering, low-flow channel section to match the existing wash bank's full capacity. The 100-year design worst-case flow of 66 m³ (2,338 ft³) would overtop the low flow banks and be contained in the flood flow channel.

To protect the outer banks of the flood flow channel from erosion, promote natural vegetation per the USACE permit requirements, and accommodate desert landscape plantings, the design engineer chose **PROPEX** Pyramat.



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